

# APPENDIX REPORT

Project No.	SHT2111009101EW	Radio Specification	WCDMA
Test sample No.	YPHT21110091003	Model No.	R4
Start test date	2021/11/9	Finish date	2021/11/10
Temperature	24.8°C	Humidity	33%
Test Engineer	Jiongsheng.Feng	Auditor	<i>Xiaodong Zhe</i>

Appendix clause	Test item	Result
A	Conducted Output Power	PASS
B	Peak-to-Average Ratio	PASS
C	26 dB Bandwidth and Occupied Bandwidth	PASS
D	Band edge	PASS
E	Conducted Spurious Emission	PASS
F	Frequency Stability	PASS
G	ERP and EIRP	PASS

**8.1 Appendix A: Conducted Output Power**

## Test Result

Band	Channel	Power(dBm)	Limit(dBm)	Verdict
Band II	9262	21.83	33	PASS
Band II	9400	21.46	33	PASS
Band II	9538	21.21	33	PASS
Band V	4132	22.60	38.5	PASS
Band V	4182	22.63	38.5	PASS
Band V	4233	21.93	38.5	PASS

Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band II	9262	HSDPA_Sub1	21.07	33	PASS
Band II	9262	HSDPA_Sub2	20.58	33	PASS
Band II	9262	HSDPA_Sub3	20.60	33	PASS
Band II	9262	HSDPA_Sub4	20.57	33	PASS
Band II	9400	HSDPA_Sub1	20.54	33	PASS
Band II	9400	HSDPA_Sub2	19.99	33	PASS
Band II	9400	HSDPA_Sub3	20.03	33	PASS
Band II	9400	HSDPA_Sub4	20.01	33	PASS
Band II	9538	HSDPA_Sub1	20.18	33	PASS
Band II	9538	HSDPA_Sub2	19.72	33	PASS
Band II	9538	HSDPA_Sub3	19.73	33	PASS
Band II	9538	HSDPA_Sub4	19.67	33	PASS
Band V	4132	HSDPA_Sub1	22.07	38.5	PASS
Band V	4132	HSDPA_Sub2	21.51	38.5	PASS
Band V	4132	HSDPA_Sub3	21.55	38.5	PASS
Band V	4132	HSDPA_Sub4	21.54	38.5	PASS
Band V	4182	HSDPA_Sub1	22.11	38.5	PASS
Band V	4182	HSDPA_Sub2	21.61	38.5	PASS
Band V	4182	HSDPA_Sub3	21.63	38.5	PASS
Band V	4182	HSDPA_Sub4	21.58	38.5	PASS
Band V	4233	HSDPA_Sub1	21.47	38.5	PASS
Band V	4233	HSDPA_Sub2	20.96	38.5	PASS
Band V	4233	HSDPA_Sub3	20.99	38.5	PASS
Band V	4233	HSDPA_Sub4	20.95	38.5	PASS

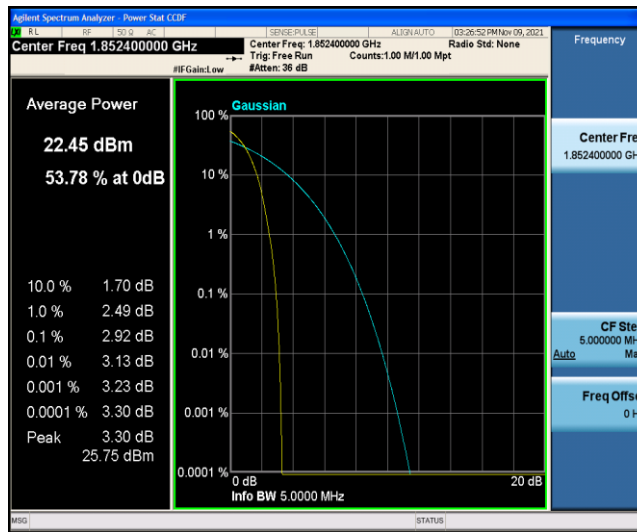
Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band II	9262	HSUPA_Sub1	19.45	33	PASS
Band II	9262	HSUPA_Sub2	19.83	33	PASS
Band II	9262	HSUPA_Sub3	20.35	33	PASS
Band II	9262	HSUPA_Sub4	19.38	33	PASS
Band II	9262	HSUPA_Sub5	21.32	33	PASS
Band II	9400	HSUPA_Sub1	19.11	33	PASS
Band II	9400	HSUPA_Sub2	19.59	33	PASS
Band II	9400	HSUPA_Sub3	20.05	33	PASS
Band II	9400	HSUPA_Sub4	19.02	33	PASS
Band II	9400	HSUPA_Sub5	21.10	33	PASS
Band II	9538	HSUPA_Sub1	19.22	33	PASS
Band II	9538	HSUPA_Sub2	19.74	33	PASS
Band II	9538	HSUPA_Sub3	20.22	33	PASS
Band II	9538	HSUPA_Sub4	19.25	33	PASS
Band II	9538	HSUPA_Sub5	21.18	33	PASS
Band V	4132	HSUPA_Sub1	20.05	38.5	PASS
Band V	4132	HSUPA_Sub2	20.42	38.5	PASS
Band V	4132	HSUPA_Sub3	20.92	38.5	PASS
Band V	4132	HSUPA_Sub4	20.05	38.5	PASS
Band V	4132	HSUPA_Sub5	22.04	38.5	PASS
Band V	4182	HSUPA_Sub1	20.11	38.5	PASS
Band V	4182	HSUPA_Sub2	20.47	38.5	PASS
Band V	4182	HSUPA_Sub3	21.04	38.5	PASS
Band V	4182	HSUPA_Sub4	20.08	38.5	PASS
Band V	4182	HSUPA_Sub5	22.08	38.5	PASS
Band V	4233	HSUPA_Sub1	19.46	38.5	PASS
Band V	4233	HSUPA_Sub2	19.90	38.5	PASS
Band V	4233	HSUPA_Sub3	20.30	38.5	PASS
Band V	4233	HSUPA_Sub4	19.45	38.5	PASS
Band V	4233	HSUPA_Sub5	21.42	38.5	PASS

## 8.2 Appendix B: Peak-to-Average Ratio

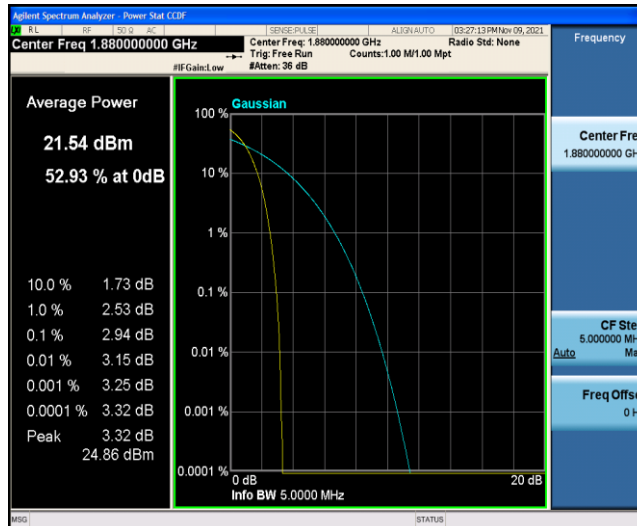
### Test Result

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band II	9262	2.92	13	PASS
Band II	9400	2.94	13	PASS
Band II	9538	2.98	13	PASS
Band V	4132	3.02	13	PASS
Band V	4182	3.04	13	PASS
Band V	4233	3.06	13	PASS

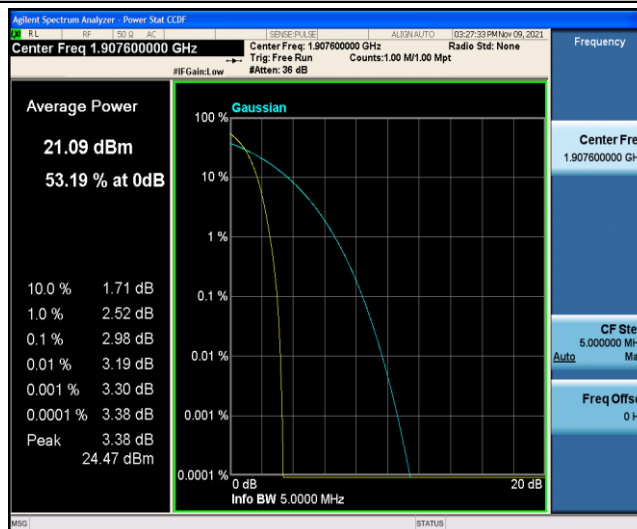
Test Graphs



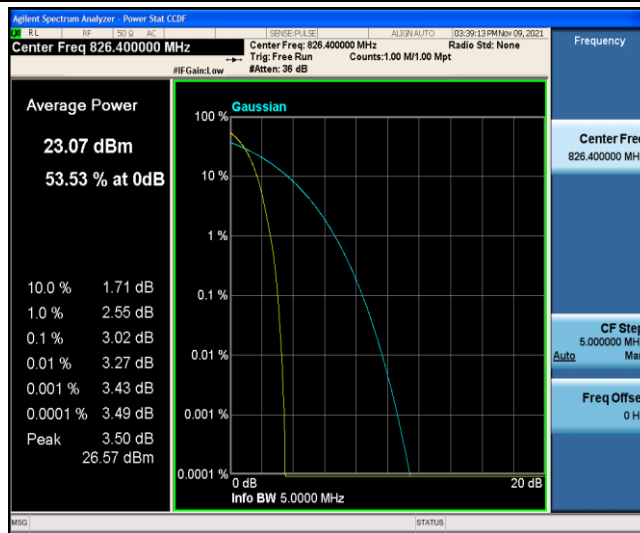
Band II\_9262



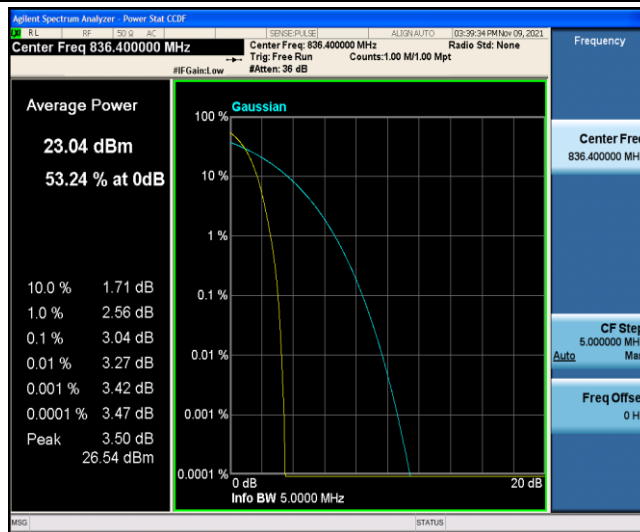
Band II\_9400



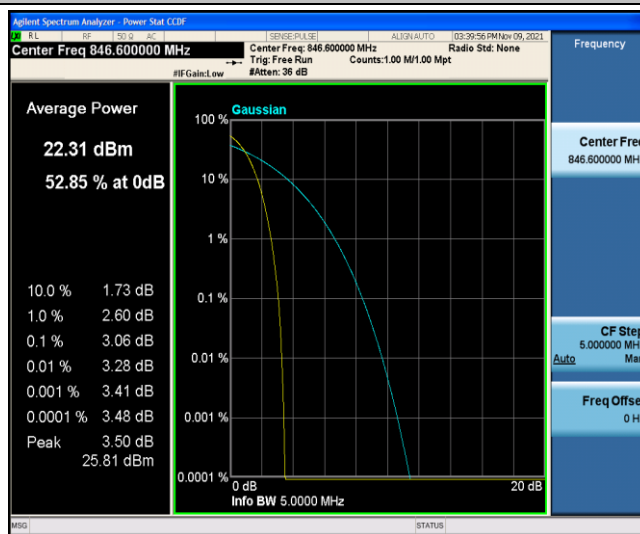
Band II\_9538



Band V\_4132



Band V\_4182



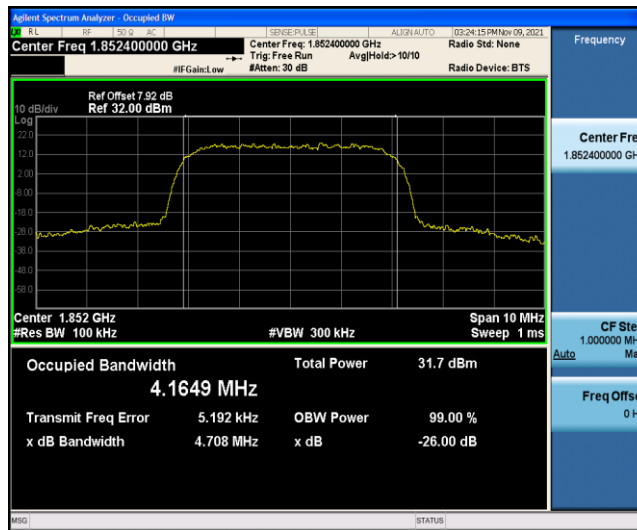
Band V\_4233

### 8.3 Appendix C: 26dB Bandwidth and Occupied Bandwidth

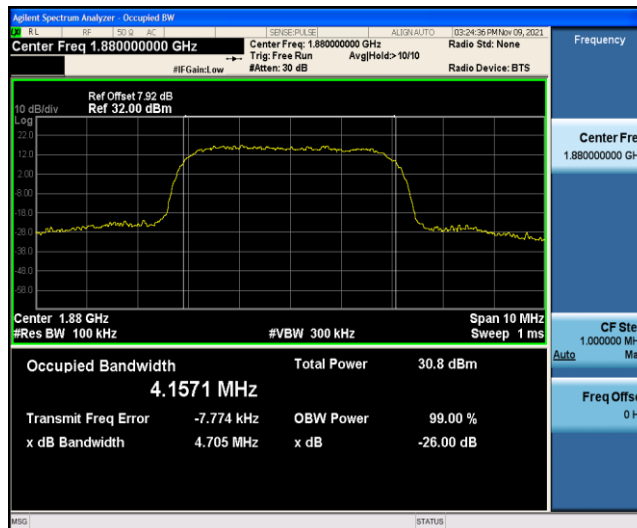
#### Test Result

Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band II	9262	4164.9	4708	---	PASS
Band II	9400	4157.1	4705	---	PASS
Band II	9538	4168.8	4705	---	PASS
Band V	4132	4150.0	4691	---	PASS
Band V	4182	4155.5	4699	---	PASS
Band V	4233	4155.8	4679	---	PASS

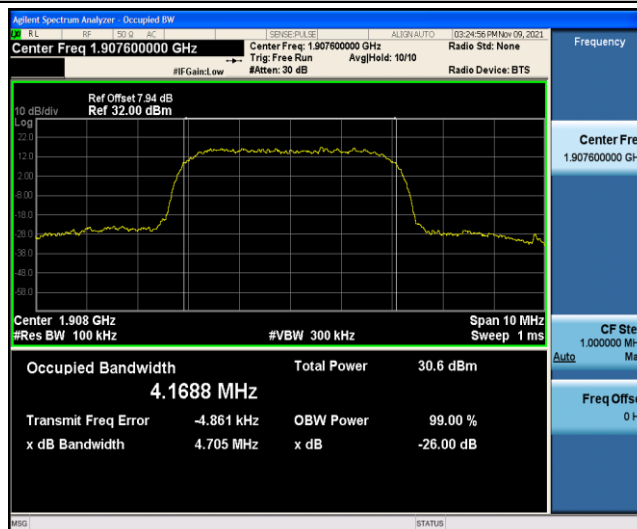
Test Graphs



Band II\_9262

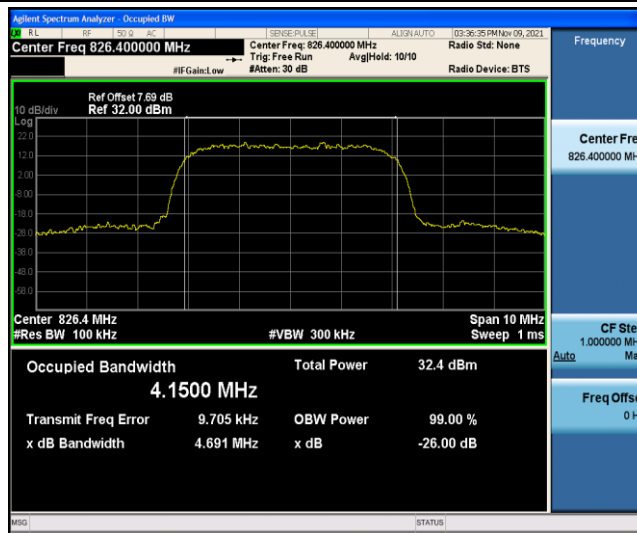


Band II\_9400

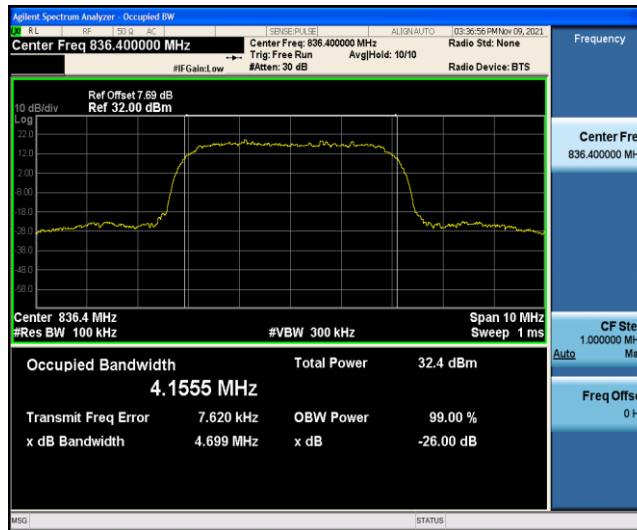


Band II\_9538

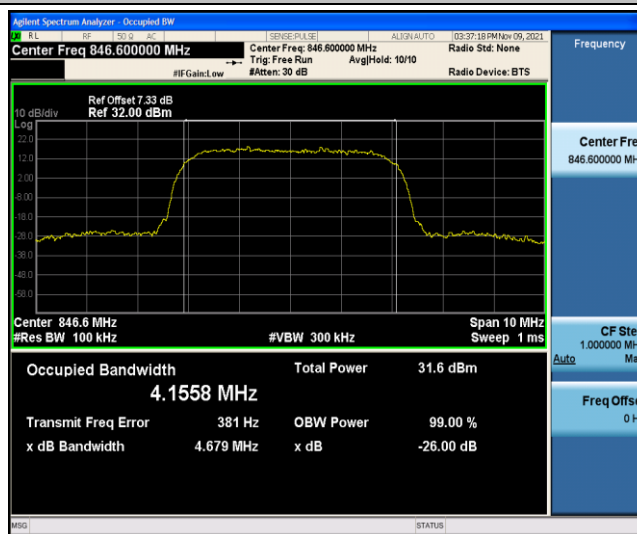




Band V\_4132



Band V\_4182



Band V\_4233

**8.4 Appendix D: Band Edge**

## Test Result

Band	Channel	Value(dBm)	Limit(dBm)	Verdict
Band II	9262	-24.19	-13	PASS
Band II	9538	-26.55	-13	PASS
Band V	4132	-24.86	-13	PASS
Band V	4233	-26.60	-13	PASS

Test Graphs



Band II\_9262



Band II\_9538



Band V\_4132



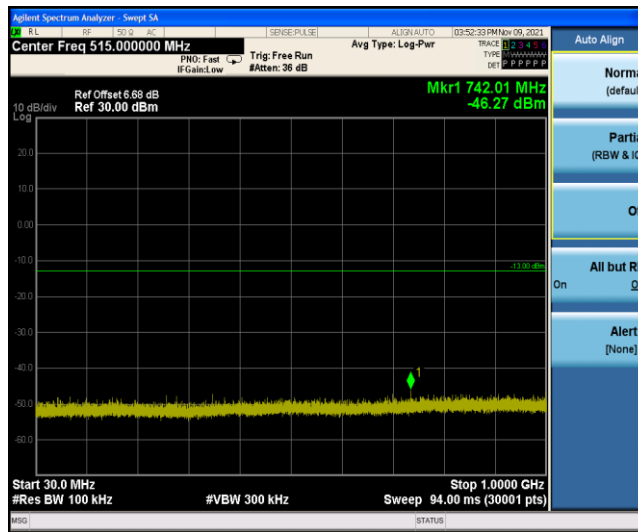
Band V\_4233

**8.5 Appendix E: Conducted Spurious Emission**

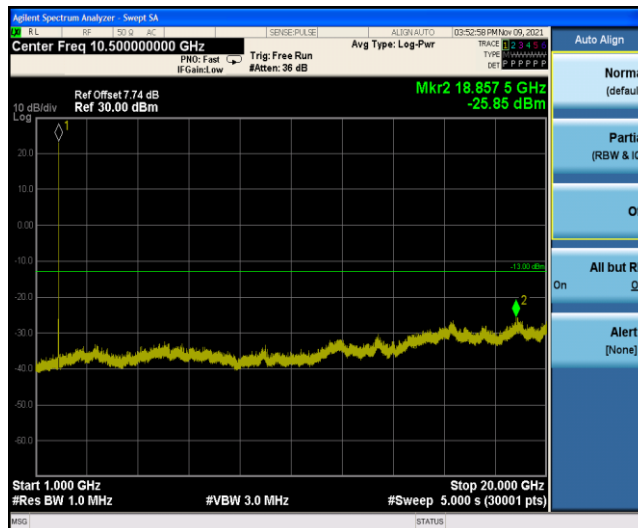
## Test Result

Band	Channel	Frequency Rang(Mhz)	Value(dBm)	Limit(dBm)	Verdict
Band II	9262	30~1000	-46.27	-13	PASS
Band II	9262	1000~20000	-25.85	-13	PASS
Band II	9400	30~1000	-46.75	-13	PASS
Band II	9400	1000~20000	-26.47	-13	PASS
Band II	9538	30~1000	-46.39	-13	PASS
Band II	9538	1000~20000	-26.24	-13	PASS
Band V	4132	30~1000	-46.10	-13	PASS
Band V	4132	1000~10000	-32.39	-13	PASS
Band V	4182	30~1000	-46.77	-13	PASS
Band V	4182	1000~10000	-32.95	-13	PASS
Band V	4233	30~1000	-46.41	-13	PASS
Band V	4233	1000~10000	-32.54	-13	PASS

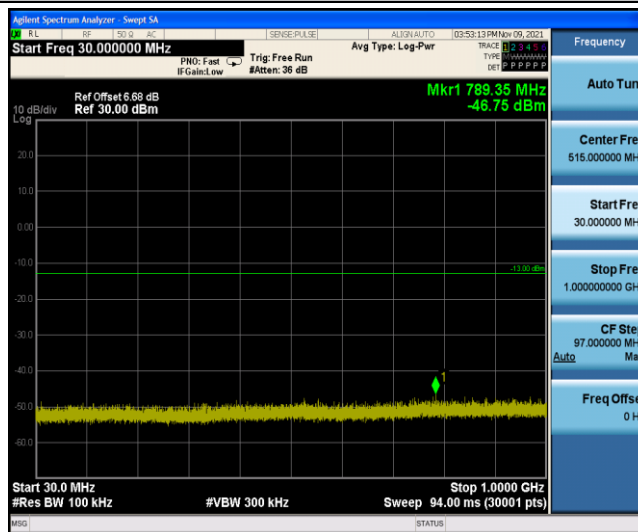
Test Graphs



Band II\_9262



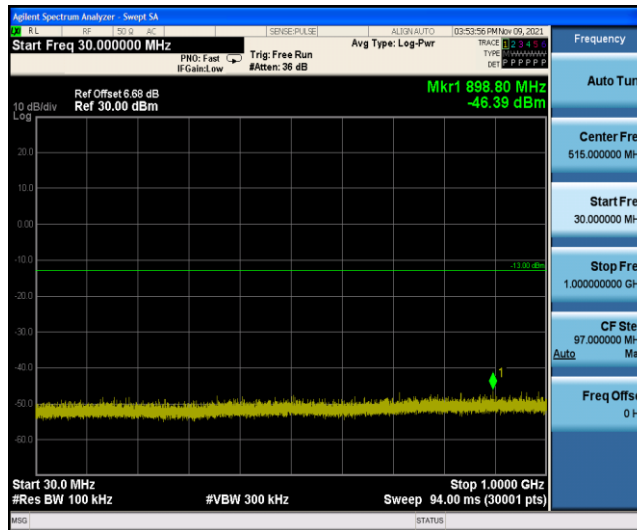
Band II\_9262



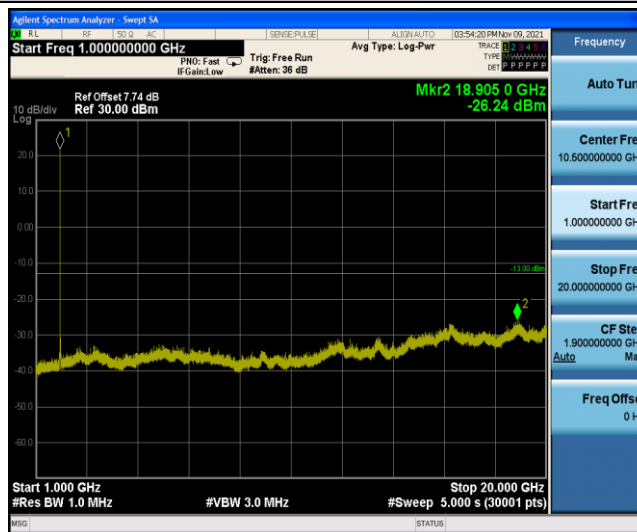
Band II\_9400



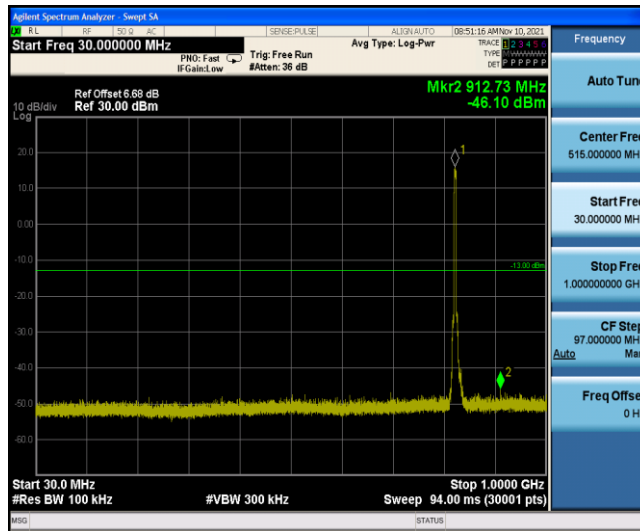
Band II\_9400



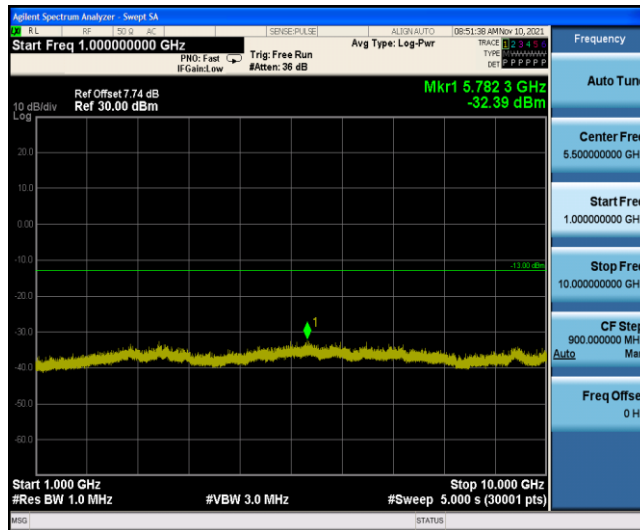
Band II\_9538



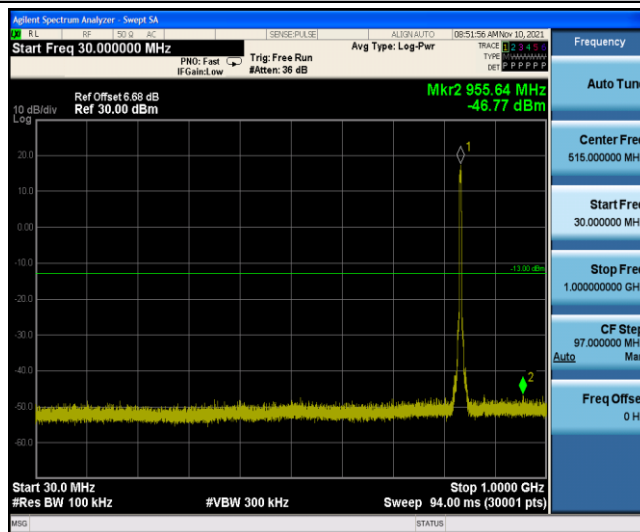
Band II\_9538



Band V\_4132

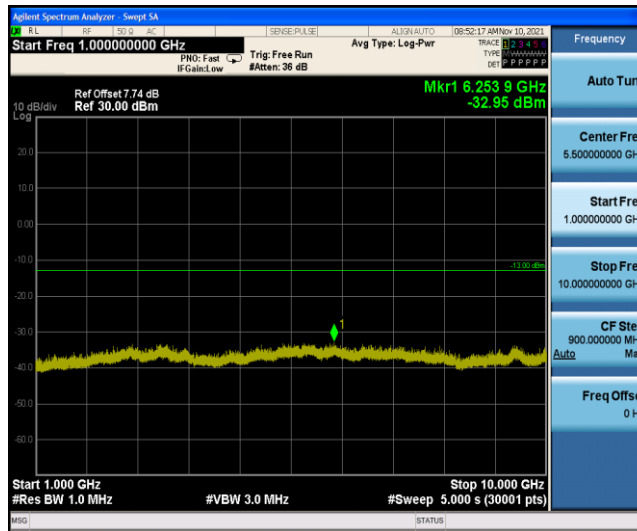


Band V\_4132

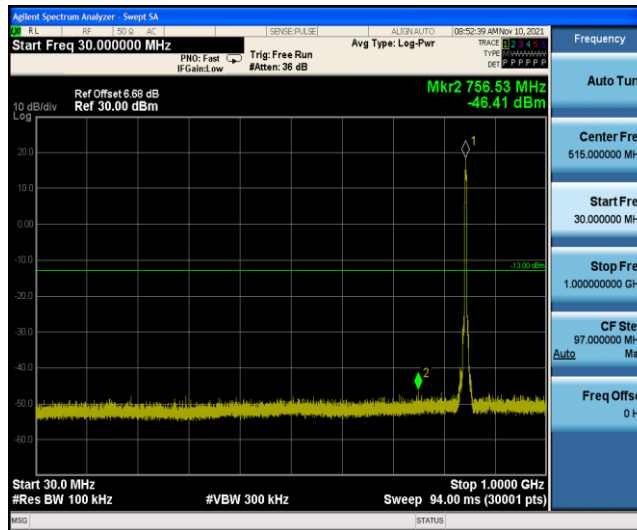


Band V\_4182

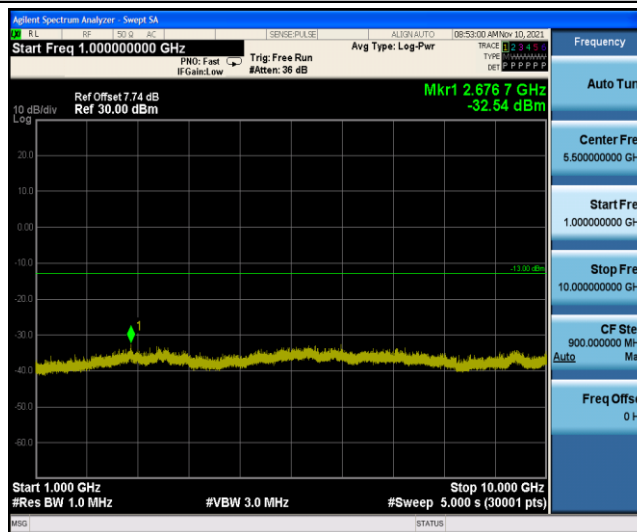




Band V\_4182



Band V\_4233



Band V\_4233

**8.6 Appendix F: Frequency Stability**

## Test Result

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band II	9262	VL	TN	6.93	0.003741	2.5	PASS
Band II	9262	VN	TN	10.56	0.005701	2.5	PASS
Band II	9262	VH	TN	10.50	0.005668	2.5	PASS
Band II	9400	VL	TN	9.50	0.005053	2.5	PASS
Band II	9400	VN	TN	6.04	0.003213	2.5	PASS
Band II	9400	VH	TN	6.54	0.003479	2.5	PASS
Band II	9538	VL	TN	5.14	0.002694	2.5	PASS
Band II	9538	VN	TN	9.53	0.004996	2.5	PASS
Band II	9538	VH	TN	8.90	0.004666	2.5	PASS
Band V	4132	VL	TN	1.48	0.001791	2.5	PASS
Band V	4132	VN	TN	-0.72	-0.000871	2.5	PASS
Band V	4132	VH	TN	-1.19	-0.001440	2.5	PASS
Band V	4182	VL	TN	-0.92	-0.001100	2.5	PASS
Band V	4182	VN	TN	1.35	0.001614	2.5	PASS
Band V	4182	VH	TN	-0.16	-0.000191	2.5	PASS
Band V	4233	VL	TN	0.16	0.000189	2.5	PASS
Band V	4233	VN	TN	-0.31	-0.000366	2.5	PASS
Band V	4233	VH	TN	-0.16	-0.000189	2.5	PASS

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band II	9262	VN	-30	7.88	0.004254	2.5	PASS
Band II	9262	VN	-20	4.23	0.002284	2.5	PASS
Band II	9262	VN	-10	10.85	0.005857	2.5	PASS
Band II	9262	VN	0	10.79	0.005825	2.5	PASS
Band II	9262	VN	10	11.50	0.006208	2.5	PASS
Band II	9262	VN	20	7.65	0.004130	2.5	PASS
Band II	9262	VN	30	6.11	0.003298	2.5	PASS
Band II	9262	VN	40	-3.63	-0.001960	2.5	PASS
Band II	9262	VN	50	8.12	0.004384	2.5	PASS
Band II	9400	VN	-30	6.44	0.003426	2.5	PASS
Band II	9400	VN	-20	9.92	0.005277	2.5	PASS
Band II	9400	VN	-10	6.82	0.003628	2.5	PASS
Band II	9400	VN	0	6.43	0.003420	2.5	PASS
Band II	9400	VN	10	8.73	0.004644	2.5	PASS
Band II	9400	VN	20	9.71	0.005165	2.5	PASS
Band II	9400	VN	30	7.02	0.003734	2.5	PASS
Band II	9400	VN	40	6.72	0.003574	2.5	PASS
Band II	9400	VN	50	8.23	0.004378	2.5	PASS
Band II	9538	VN	-30	5.12	0.002684	2.5	PASS
Band II	9538	VN	-20	9.56	0.005012	2.5	PASS
Band II	9538	VN	-10	4.51	0.002364	2.5	PASS
Band II	9538	VN	0	9.91	0.005195	2.5	PASS
Band II	9538	VN	10	8.93	0.004681	2.5	PASS
Band II	9538	VN	20	8.47	0.004440	2.5	PASS
Band II	9538	VN	30	7.98	0.004183	2.5	PASS
Band II	9538	VN	40	8.84	0.004634	2.5	PASS
Band II	9538	VN	50	8.90	0.004666	2.5	PASS
Band V	4132	VN	-30	-0.28	-0.000339	2.5	PASS
Band V	4132	VN	-20	2.00	0.002420	2.5	PASS
Band V	4132	VN	-10	-1.47	-0.001779	2.5	PASS
Band V	4132	VN	0	-2.30	-0.002783	2.5	PASS
Band V	4132	VN	10	-1.63	-0.001972	2.5	PASS
Band V	4132	VN	20	-0.16	-0.000194	2.5	PASS
Band V	4132	VN	30	0.43	0.000520	2.5	PASS
Band V	4132	VN	40	-2.40	-0.002904	2.5	PASS
Band V	4132	VN	50	-0.24	-0.000290	2.5	PASS
Band V	4182	VN	-30	-0.26	-0.000311	2.5	PASS
Band V	4182	VN	-20	-0.68	-0.000813	2.5	PASS
Band V	4182	VN	-10	0.13	0.000155	2.5	PASS
Band V	4182	VN	0	0.99	0.001184	2.5	PASS
Band V	4182	VN	10	-0.66	-0.000789	2.5	PASS
Band V	4182	VN	20	3.29	0.003934	2.5	PASS
Band V	4182	VN	30	0.33	0.000395	2.5	PASS
Band V	4182	VN	40	2.20	0.002630	2.5	PASS
Band V	4182	VN	50	1.86	0.002224	2.5	PASS
Band V	4233	VN	-30	1.47	0.001736	2.5	PASS

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Band V	4233	VN	-20	0.26	0.000307	2.5	PASS
Band V	4233	VN	-10	-0.77	-0.000910	2.5	PASS
Band V	4233	VN	0	1.17	0.001382	2.5	PASS
Band V	4233	VN	10	0.48	0.000567	2.5	PASS
Band V	4233	VN	20	3.18	0.003756	2.5	PASS
Band V	4233	VN	30	-0.34	-0.000402	2.5	PASS
Band V	4233	VN	40	0.01	0.000012	2.5	PASS
Band V	4233	VN	50	-1.21	-0.001429	2.5	PASS

## 8.7 Appendix G: ERP and EIRP

### Test Result

FCC

Band	Mode	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP		Limit (W)	Verdict
				(dBm)	(W)		
Band II	WCMDA	21.83	0.60	22.43	0.1750	2	PASS
	HSDPA	21.07	0.60	21.67	0.1469	2	PASS
	HSUPA	21.32	0.60	21.92	0.1556	2	PASS

Band	Mode	Conducted Power (dBm)	Antenna Gain (dBi)	ERP		Limit (W)	Verdict
				(dBm)	(W)		
Band V	WCMDA	22.63	-0.70	19.78	0.0951	7	PASS
	HSDPA	22.11	-0.70	19.26	0.0843	7	PASS
	HSUPA	22.08	-0.70	19.23	0.0838	7	PASS

-----End of the Report -----